

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

APR 3 1939

Date of writing Report 1/3/39 When handed in at Local Office 2/3/39 Port of Hong Kong
 No. in Survey held at Hong Kong Date, First Survey 13/4/39 Last Survey 24/2/1939
 Reg. Book. _____ (Number of Visits 6)
 on the M/V "ANTONIA" Tons { Gross 502.12
 Net 297.11
 Built at Hong Kong By whom built W.S. Bailey & Co Ltd Yard No. 292 When built 1939
 Owners Messrs. Messy & Co Inc Port belonging to China
 Electric Light Installation fitted by Wm. G. Jack & Co Ltd Contract No. 292 When fitted 1939
 Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution Two wire

Pressure of supply for Lighting 115 volts, Heating 115 volts, Power 115 volts.

Direct or Alternating Current, Lighting Direct Power Direct

If alternating current system, state frequency of periods per second _____

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding rating Yes, are they compound wound Yes

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator _____

Where more than one generator is fitted are they arranged to run in parallel Yes, is an adjustable regulating resistance fitted in series with each shunt field Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes

Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Port side of engine room.

is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators _____ and _____, are the generators protected from mechanical injury and damage from water, steam or oil Yes

are their axes of rotation fore and aft Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes

Main Switch Boards, where placed On forward bulk head of engine room port side

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard _____

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes

are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards _____ and _____

are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework _____

and is the frame effectively earthed _____ Are the fittings as per Rule regarding:— spacing or shielding of live parts

Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus bars Yes

individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches _____

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Double Pole switches

with Equalizer switch inter connected to make & break before & after main switch. All outgoing switches double pole with D.P. fuses. Both generators protected with overload & R/C circuit breakers

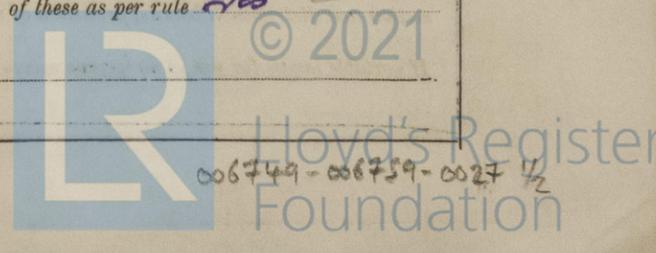
Instruments on main switchboard 2 ammeters 2 voltmeters _____ synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system By earth

indicating lamps

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes



Cables: Single, twin, concentric, or multicore Single are the cables insulated and protected as per Tables IV, V, XI or XIII of the Rules Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2 volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound nil

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage Yes

Support and Protection of Cables, state how the cables are supported and protected cables supported with metal clips spaced 6" apart. All engine room cables in steel conduit - other main cables are armoured

If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII Yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements —

Joints in Cables, state if any, and how made, insulated, and protected nil

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yes state the material of which the bushes are made lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas The installation is earthed throughout

are their connections made as per Rule Yes

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven —

Navigation Lamps, are these separately wired Yes, controlled by separate switch and separate fuses Yes, are the fuses double pole Yes

are the switches and fuses grouped in a position accessible only to the officers on watch Yes

has each navigation lamp an automatic indicator as per Rule Yes

Secondary Batteries, are they constructed and fitted as per Rule —

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight Yes

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected Brass Swards

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected nil

how are the cables led —

where are the controlling switches situated —

Searchlight Lamps, No. of one, whether fixed or portable Fixed, are their fittings as per Rule Yes

Arc Lamps, other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —

Motors, are their working parts readily accessible Yes, are the coils self-contained and readily removable for replacement Yes

are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material Yes

are they protected from mechanical injury and damage from water, steam or oil Yes are their axes of rotation fore and aft central pumps except

if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type —

if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule Yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule Yes

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings —

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office —

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	One	25	115	217	1100	Diesel engine	Crude oil	Above 150° F
AUXILIARY	One	15.5	115	135	750	—	—	—
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.3024	37	.103	217	140	40	Rubber	L.C. Steel armoured
EQUALISER CONNECTIONS	1	.1009	19	.083		148	40	—	—
AUXILIARY GENERATOR	1	.1478	37	.072	135	152	40	—	—
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	1	.00299	3	.036	3.65	12	30	—	Steel conduit
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
Bridge & Saloon Deck	1	.00701	7	.044	27	21	60	—	L.C. Braided
Middleship Circuit	1	.00701	7	.036	19	24	30	—	—
WIRELESS	1	.00701	7	.036	16	24	120	—	L.C. Braided
SEARCHLIGHT	1	.00299	3	.036	5	12	60	—	—
MASTHEAD LIGHT	1	.00299	3	.029	.6	7.8	60	—	—
SIDE LIGHTS	1	—	3	.029	.6	7.8	50	—	—
COMPASS LIGHTS	1	—	3	.029	.4	7.8	20	—	—
POOP LIGHTS	1	—	3	.029	.6	7.8	120	—	—
CARGO LIGHTS	1	—	3	.029	1.6	7.8	40	—	—
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS	1	1	.06	19	.064	71	83	25	Rubber	Steel Conduit
FIRE & BILGE GENERAL SERVICE PUMP	1	1	.11680	37	.064	118	130	80	—	—
AUX. CIR. PUMP EMERGENCY BILGE PUMP	1	1	.01046	7	.044	22	31	60	—	—
SANITARY PUMPS	2	1	.01046	7	.044	25	31	68	—	—
CIRC. SEA WATER PUMPS	1	1	.06	19	.064	71	83	25	—	—
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR	1	1	.06	19	.064	79	83	60	—	—
FRESH WATER PUMP	1	1	.02214	7	.064	21	46	80	—	—
AUTO. VAC. PUMP ENGINE TUBING GEAR	1	1	.00299	3	.036	8	12	20	—	—
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	1	1	.01046	7	.044	27	31	60	—	—
CENTRIFUGE OIL PUMP TRANSFER PUMP	1	1	.00299	3	.036	9	12	56	—	—
WINDLASS	1	1	.11680	37	.064	123	130	138	—	L.C. Steel armoured
WINCHES, FORWARD	1	1	.11680	37	.064	123	130	76	—	—
	1	1	.02214	7	.064	41	46	60	—	—
WINCHES, AFT	1	1	.02214	7	.064	41	46	60	—	—
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

WILLIAM C. JACK & CO., LTD.

W.C. Jack
 General Manager

Electrical Engineers.

Date 2 MAR. 1939

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass 30ft

The nearest cables to the compasses are as follows:—

A cable carrying 25 Ampères — feet from standard compass 4 feet from steering compass.

A cable carrying 4 Ampères — feet from standard compass 10 feet from steering compass.

A cable carrying 5 Ampères — feet from standard compass 10 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be — degrees on — course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

FOR W. S. BAILEY & CO., LTD.

W.S. Bailey

Builder's Signature Manager 2/3/39

Is this installation a duplicate of a previous case *not exactly* If so, state name of vessel *M/V Governor Wright*

General Remarks (State quality of workmanship, opinions as to class, &c. *This electric installation has been*)

efficiently fitted on board in accordance with the rules & approved plans the materials & workmanship being sound & good.

On completion the installation was megger tested, tried under working conditions & found satisfactory

Makers test sheet for motors enclosed.

We have been advised makers test sheets for generators have been forwarded direct to London by Messrs Electromotorin Works Hainan Serial N° 500371 25KW N° 500,375 15.5KW.

Notes
4/4/39

Total Capacity of Generators 40.5 Kilowatts.

The amount of Fee ...	\$ 81.4	:	When applied for,	23-2-1939
Travelling Expenses (if any)	\$ 20	:	When received,	3-4-1939
	<u>\$ 834</u>			

Chas R. Rowcliffe
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

WED 12 APR 1939

Assigned

See HKJ. J.E. 8301



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2m.8.31.—Transfer
 The Surveyors are requested not to write on or below the space for Committee's Minutes.